

**STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION**

**APPLICATION OF AWR DISPOSAL, LLC
TO APPROVE SALT WATER
DISPOSAL WELL IN LEA
COUNTY, NEW MEXICO.**

CASE NO. _____

APPLICATION

AWR Disposal, LLC (“AWR”), OGRID No. 328805, through its undersigned attorneys, hereby makes this application to the Oil Conservation Division pursuant to the provisions of N.M. Stat. Ann. § 70-2-12, for an order approving drilling of a salt water disposal well in Lea County, New Mexico. In support of this application, AWR states as follows:

(1) AWR proposes to drill the Feeling Good Again SWD #1 well at a surface location 1495 feet from the North line and 227 feet from the East line of Section 28, Township 23 South, Range 35 East, NMPM, Lea County, New Mexico for the purpose of operating a salt water disposal well.

(2) AWR seeks authority to inject salt water into the Devonian-Silurian formation at a depth of 15,935’ -17,567’.

(3) AWR intends to use 7 inch tubing inside the surface and intermediate casings and 5 ½ inch tubing inside the liner and requests that the Division approve a maximum daily injection rate for the well of 50,000 bbls per day.

(4) AWR anticipates using an average pressure of 2,383 psi for this well, and it requests that a maximum pressure of 3,187 psi be approved for the well.


(5) A proposed C-108 for the subject well is attached hereto in Attachment A.

(6) The granting of this application will avoid the drilling of unnecessary wells, will prevent waste, and will protect correlative rights.

WHEREFORE, AWR requests that this application be set for hearing before an Examiner of the Oil Conservation Division on March 5, 2020; and that after notice and hearing, the Division enter its order approving this application.

Respectfully submitted,

MODRALL, SPERLING, ROEHL, HARRIS
& SISK, P.A.

By: 
Deana Bennett
Post Office Box 2168
500 Fourth Street NW, Suite 1000
Albuquerque, New Mexico 87103-2168
Telephone: 505.848.1800
Attorneys for Applicant

CASE NO. _____: Application of AWR Disposal, LLC for approval of salt water disposal well in Lea County, New Mexico. Applicant seeks an order approving the Feeling Good Again SWD #1 well at a surface location 1,495 feet from the North line and 227 feet from the East line of Section 28, Township 23 South, Range 35 East, NMPM, Lea County, New Mexico for the purpose of operating a salt water disposal well. Applicant requests authorization to inject salt water into the into the Devonian-Silurian formation at a depth of 15,935'-17,567'. Applicant requests that the Division approve a maximum daily injection rate for the well of 50,000 bbls per day. Said location is approximately 15.2 miles northwest of Jal, New Mexico.

Revised March 23, 2017

RECEIVED:	REVIEWER:	TYPE:	APP NO:
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ABOVE THIS TABLE FOR OCD DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
 - Geological & Engineering Bureau -
 1220 South St. Francis Drive, Santa Fe, NM 87505



ADMINISTRATIVE APPLICATION CHECKLIST

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Applicant: AWR DISPOSAL LLC **OGRID Number:** 328805
Well Name: FEELING GOOD AGAIN SWD #1 **API:** TBD
Pool: SWD, DEVONIAN-SILURIAN **Pool Code:** 97869

SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED BELOW

- 1) **TYPE OF APPLICATION:** Check those which apply for [A]
 A. Location - Spacing Unit - Simultaneous Dedication
 NSL NSP (PROJECT AREA) NSP (PRORATION UNIT) SD
- B. Check one only for [I] or [II]
 [I] Commingling - Storage - Measurement
 DHC CTB PLC PC OLS OLM
 [II] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
 WFX PMX SWD IPI EOR PPR

- 2) **NOTIFICATION REQUIRED TO:** Check those which apply.
- A. Offset operators or lease holders
 - B. Royalty, overriding royalty owners, revenue owners
 - C. Application requires published notice
 - D. Notification and/or concurrent approval by SLO
 - E. Notification and/or concurrent approval by BLM
 - F. Surface owner
 - G. For all of the above, proof of notification or publication is attached, and/or,
 - H. No notice required

FOR OCD ONLY	
<input type="checkbox"/>	Notice Complete
<input type="checkbox"/>	Application Content Complete

3) **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

CHRIS WEYAND

Print or Type Name

Signature

2/4/2020
Date

512.600.1764
Phone Number

CHRIS@LONQUIST.COM
e-mail Address

EXHIBIT
<u>A</u>

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL
RESOURCES DEPARTMENT

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

FORM C-108
Revised June 10, 2003

APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: _____ Secondary Recovery _____ Pressure Maintenance X Disposal _____ Storage
Application qualifies for administrative approval? X Yes _____ No

II. OPERATOR: AWR DISPOSAL, LLC

ADDRESS: 3300 N. A Street, Ste 220, Midland, Texas 79705

CONTACT PARTY: Chris Weyand (Agent)

PHONE: 512-600-1764

III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection.
Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? _____ Yes X No
If yes, give the Division order number authorizing the project: _____

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

*VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).

*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

NAME: Christopher B. Weyand

TITLE: Consulting Engineer

SIGNATURE: _____

DATE: 2/4/2020

E-MAIL ADDRESS: chris@lonquist.com

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: _____

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

Side 2

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

- (1) Lease name; Well No.; Location by Section, Township and Range; and footage location within the section.
- (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
- (3) A description of the tubing to be used including its size, lining material, and setting depth.
- (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District Offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

- (1) The name of the injection formation and, if applicable, the field or pool name.
- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;
- (3) The formation name and depth with expected maximum injection rates and pressures; and,
- (4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

Production Casing

Hole Size: 12.250"

Casing Size: 9.625"

Cemented with: 3,114 sx.

or _____ ft³

Top of Cement: Surface

Method Determined: Circulation

Production Liner

Hole Size: 8.500"

Casing Size: 7.625"

Cemented with: 347 sx.

or _____ ft³

Top of Cement: 11,200'

Method Determined: Logged

Total Depth: 17,567'

Injection Interval

15,935 feet to 17,567 feet

(Open Hole)

INJECTION WELL DATA SHEET

Tubing Size: 7", 26 lb/ft, P-110, TCPC from 0'- 11,109' and 5.500", 17 lb/ft, P-110 TCPC from 11,100' – 15,895'

Lining Material: Duoline

Type of Packer: 7-5/8" x 5-1/2" TCPC Permanent Packer with High Temp Elastomer and Full Inconel 925 trim

Packer Setting Depth: 15,895'

Other Type of Tubing/Casing Seal (if applicable): _____

Additional Data

1. Is this a new well drilled for injection? X Yes No

If no, for what purpose was the well originally drilled? N/A

2. Name of the Injection Formation: Devonian, Silurian, Fusselman and Montoya (Top 100')

3. Name of Field or Pool (if applicable): SWD; Devonian-Silurian

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. No, new drill.

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area:

Delaware: 5,604'

Bone Spring: 9,713

Wolfcamp: 11,622'

Atoka: 12,792'

Morrow: 13,478'

AWR Disposal, LLC

Feeling Good Again SWD No. 1

FORM C-108 Supplemental Information

III. Well Data

A. Wellbore Information

1.

Well information	
Lease Name	Feeling Good Again SWD
Well No.	1
Location	S-28 T-23S R-35E
Footage Location	1495' FNL & 227' FEL

2.

a. Wellbore Description

Casing Information					
Type	Surface	Intermediate 1	Intermediate 2	Production	Liner
OD	26"	20"	13.375"	9.625"	7.625"
WT	0.75"	0.812"	0.480"	0.472"	0.500"
ID	24.500"	18.376"	12.415"	8.681"	6.625"
Drift ID	24.500"	18.188"	12.259"	8.525"	6.500"
COD	27"	21.00"	14.375"	10.625"	7.625"
Weight	202 lb/ft	169 lb/ft	68 lb/ft	47 lb/ft	39 lb/ft
Grade	X56	L80 BTC	HCL-80	HCP-110	P-110
Hole Size	30"	24"	17.5"	12.25"	8.5"
Depth Set	1,800'	4,600'	5,500'	11,700'	11,200' – 15,935'

b. Cementing Program

Cement Information					
Casing String	Surface	Intermediate 1	Intermediate 2	Production	Liner
Lead Cement	Extenda Cem	Neocem	Neocem	Versacem C, Neocem, Neocem	Neocem
Lead Cement Volume	1,017	1,569	920	Stage 1: 654 sx Stage 2: 400 sx Stage 3: 883 sx	347
Tail Cement	Halcem	Halcem	Neocem	Versacem C, Halcem, Halcem	N/A
Tail Cement Volume	1,691	3,032	3,146	Stage 1: 14 sx Stage 2: 797 sx Stage 3: 366 sx	N/A
Cement Excess	75%	60%	60%	25%	35%
TOC	Surface	Surface	Surface	Surface	11,200'
Method	Circulate to Surface	Circulate to Surface	Circulate to Surface	Circulate to Surface	Logged

3. Tubing Description

Tubing Information		
OD	7"	5.5"
WT	0.362"	0.304"
ID	6.276"	4.892"
Drift ID	7.875"	6.050"
COD	6.151"	4.653"
Weight	26 lb/ft	17 lb/ft
Grade	P-110 TCPC	P-110 TCPC
Depth Set	0'-11,100'	11,100'-15,895'

Tubing will be lined with Duoline.

4. Packer Description

7-5/8" x 5-1/2" TCPC Permanent Packer with High Temp Elastomer and Full Inconel 925 trim

B. Completion Information

1. Injection Formation: Devonian, Silurian, Fusselman, Montoya (Top 100')
2. Gross Injection Interval: 15,935' – 17,567'

Completion Type: Open Hole

3. Drilled for injection.
4. See the attached wellbore schematic.
5. Oil and Gas Bearing Zones within area of well:

Formation	Depth
Delaware	5,604'
Bone Spring	9,713'
Wolfcamp	11,622'
Atoka	12,792'
Morrow	13,478'

VI. Area of Review

Within the AOR, only the North Custer Mountain Unit #1 (API No. 30-025-21601) well penetrates the proposed injection interval. As shown in the attached well records, the well (TD = 16,000') was drilled 154' into the Devonian (Top @ 15,846'). A plug (100 sx) was then spotted from 16,000' to 15,700' on 7/15/1966 isolating the injection zone from formations above.

VII. Proposed Operation Data

1. Proposed Daily Rate of Fluids to be Injection:

Average Volume: 40,000 BPD
Maximum Volume: 50,000 BPD

2. Closed System

3. Anticipated Injection Pressure:

Average Injection Pressure: 2,383 PSI (surface pressure)
Maximum Injection Pressure: 3,187 PSI (surface pressure)

4. The injection fluid is to be locally produced water. It is expected that the source water will predominantly be from the Bone Spring and Wolfcamp formations. Attached are produced water sample analyses taken from the closest wells that feature samples from the Delaware, Bone Spring, Wolfcamp, Pennsylvanian, Morrow, Atoka, and Devonian.

5. The disposal interval is non-productive. No water samples are available from the surrounding area.

VIII. Geological Data

The Devonian formation is a dolomitic ramp carbonate that occurs below the Woodford shale and above the Fusselman formation. Strata found in the Devonian formation include two major groups, the Wristen Buildups and the Thirtyone Deepwater Chert, with the Wristen being more abundant. The Wristen Groups is composed of mixed limestone and dolomites with mudstone to grainstone and boundstone textures. Porosity in the Wristen group is a result of both primary and secondary development. Present are moldic, vugular, karstic (including collapse breccia) features that allow for higher porosities and permeabilities. The Thirtyone Formation contains two end-member reservoir facies, skeletal packstones/grainstones and spiculitic chert, with most of the porosity and permeability found in the coarsely crystalline cherty dolomite. These particular characteristics allow for this formation to be a tremendous Salt Water Disposal horizon.

A. Injection Zone: Siluro-Devonian Formation

Formation	Depth
Rustler Anhydrite	1,546'
Capitan Reef	4,662'
Delaware	5,604'
Bone Spring	8,799'
Wolfcamp	11,622'
Strawn	12,529'
Atoka	12,792'
Morrow	13,478'
Mississippian	15,223'
Woodford	15,672'
Devonian	15,885'
Montoya	17,467'

B. Underground Sources of Drinking Water

Four water wells exist within one mile of the proposed well location. These wells do not have any data on the New Mexico Water Rights Reporting System website, but water wells in the surrounding area have an average total depth of 593 ft and an average depth to water of 188 ft generally producing from the Santa Rosa. The upper Rustler may also be another USDW and will be protected. The Capitan reef and corresponding aquifer has been identified as a protectable water source, so an additional casing string will be set in the well.

IX. Proposed Stimulation Program

Stimulate with up to 50,000 gallons of acid.

X. Logging and Test Data on the Well

There are no logs or test data on the well. During the process of drilling and completion resistivity, gamma ray, and density logs will be run.

XI. Chemical Analysis of Fresh Water Wells

There are four water wells that exist within one mile of the proposed well location. If a sample can be obtained, analysis results will be provided as soon as possible. A map showing the four water wells CP-01099-POD1, CP-00433-POD2, CP-01100-POD1, and CP-00433-POD1 is attached. The New Mexico Water Rights Reporting System website did not have any log information on these wells.

XII. Affirmative Statement of Examination of Geologic and Engineering Data

Based on the available engineering and geologic data we find no evidence of open faults or any other hydrologic connection between the disposal zone (in the proposed Feeling Good Again SWD #1) and any underground sources of drinking water.

NAME: Herb Wacker

TITLE: Geologist

SIGNATURE:

Herb Wacker
TOPG #4577

DATE:

Nov 1, 2019

AWR Disposal LLC		Feeling Good Again SWD		Location - Sec 28, Twp 23S, R 35E		TD	17,567'	Directions to Site - From Jal Travel N 6.7miles on NM 18 - Turn Left (W) on Cooper Cemetary Road/J7and travel 14.2miles to location. Lat/Long 32.2787606, 103.3647428	
Lea County NM		Drilling and Complete		AFE # tbd	GL/KB	3,418			
Geologic Tops (MD ft)		Section Objectives		Drilling Problems	Drilling Fluid	Logging	Casing	Cement (HOLD)	Injection String
Rustler	1546	Surface - to isolate the Aquifers Drill 30" Hole to 1800' Set and Cement 26" Casing	Loss Circulation Hole Cleaning Wellbore stability in the Red Beds Anhydrite in the Rustler	Spud Mud MW< 9.0	No Logs. MWD	1800' of 26", 202pp, X56 pipe (conn tbd) Centralizers - bottom 2 joints and every 3rd jt thereafter, Cement basket at 200'	Lead - sx 1017of HES Extenda Cem, 13.7ppg, 4.5hrs TT Tail - 1691sx of Halcem 3hr TT 75% Excess 1000psi CSD after 10hrs		
Surface TD -	1800								
Salt Section		1st Intermediate to isolate the Salt - Drill 2800' of 24" Hole 1800' - 4600' Set and Cement 20" Casing	Anhydrite Salt Sections	Saturated Brine	MWD GR Mudlogger on site by 2000'	5M A Section Casing Bowl 4600' of 169# L80 BTC Centralizers - bottom jt, every 3rd joint in open hole and 2 jt inside the surface casing	Lead - 1569 sx of Neocem 12.9ppg, 5hr TT Tail - 3032sx of Halcem, 14.8ppg 60% Excess 1000psi CSD after 10 hrs Cement to Surface		
1st Int TD	4600								
ECP DV Tool -	4650	2nd Intermediate - to isolate the Capitan Reef Drill 900' of 17-1/2" Hole 4600' - 5500" Set and Cement 13-3/8" Casing in 2 Stages	Losses	Fresh water Gel Polymer	MWD GR, Triple Combo and CBL of 20" casing	5500' of 13-3/8" 68# HCL80 BTC Centralizers - bottom jt, every 3rd joint in open hole and 2 jt inside the surface casing. Stage tool positioned 100' below base of salt	Stage 2 3146sx Neocem 13.7ppg, 0% Excess. Cement to Surface Stage 1 920 sx Neocem 13.7ppg 60% Excess. 1000psi CSD after 10hrs		11100' of 7" P110 26# TCPC
Capitan Reef	4662								4795' of 5-1/2" P110 17# TCPC
Lamar	5498	3rd Intermediate - to isolate the DMG Drill 6200' of 12-1/4" Hole 5500' - 11,700" Set and Cement 9-5/8" Casing and Cement in 3 stages	Hard Drilling in the Brushy Canyon Seepage to Complete Loss Water Flows Some Anhydrite H2S possible Production in the Bone Spring and Wolfcamp Ballooning is possible in Cherry Canyon and Brushy if Broken Down	8.5 ppg OBM High Vis Sweeps UBD/MPD Drilling Choke	MWD GR Triple combo + CBL of 13-3/8" Casing	10M B Section 11,700' of 9-5/8" 47# HCP110 BTC Externally Coat Between DV Tools DV tool at at 9700' ECP DV Tool 50' below Previous Casing Shoe Centralizers - bottom jt, 100' aside of DV tool, every 3rd joint in open hole and 5 within the surface casing	Stage 3: 0% Excess Lead 883 sx Neocem 12.9 ppg Tail 366sx Halcem 14.8ppg 1000psi CSD after 10 hrs Cement to Surface Stage 2: 25% Excess Lead 400sx Neocem 12.9 ppg Tail 797sx Halcem 14.8ppg 1000psi CSD after 10 hrs Stage 1: 25% Excess Single Slurry 668sx Halcem 14.8ppg. 1000psi CSD after 10hrs		Duoline Internally Coated Injection Tubing
ECP DV Tool -	5550								
Bell Canyon	5604								
Cherry Canyon -	6162								
Brushy Canyon -	7598								
DV Tool -	9700	3rd Int Liner Top -	11,200	Wolfcamp -	11622	2nd Int TD -	11,700		
Bone Spring -	9713								
Strawn -	12529	4th Intermediate Liner - to isolate the Atoka Drill 4235' of 8-1/2" Hole 11,700' - 15,935' Set 7-5/8" Liner and Cement in Single Stage	High Pressure (up to 15ppg) and wellbore instability (fracturing) expected in the Atoka 150 target radius Hard Drilling in the Morrow Clastic	12.5 ppg OBM UBD/MPD Drilling Choke	MWD GR Triple combo, CBL of 9-5/8" Casing	4735' of 7-5/8" 39# USS Liberty FJM (Gas Tight) VersaFlex Packer Hanger Centralizers on and 1 jt above shoe jt and then every 2nd jt.	Single Slurry 347 sx Neocem 13.7ppg, 35% Excess. 1000psi CSD after 10hrs		7-5/8" x 5-1/2" TCPC Permanent Packer with High Temp Elastomer and full Inconel 925 trim
Atoka -	12792								
Morrow -	13478								
Miss Lst -	15223								
Woodford -	15885								
Perm Packer -	15,895	3rd Int TD -	15,935	Devonian -	15,885	Fusselman -	16890		
Montoya -	17,467'	Injection Interval Drill 1841' of 6-1/2" hole 15935' - 17,567'	Chert is possible Loss of Circulation is expected H2S encountered on the Striker 3 well BHT estimated at 280F	Brine Water - possible flows	MWD GR Triple Combo with FMI, CBL of 7-5/8" Liner	Oper.hole completion	Displace wellbore with Clean Brine after running Injection String		
TD -	17,567'								

District I
1625 N French Dr., Hobbs, NM 88240
Phone (575) 393-6161 Fax (575) 393-0720
District II
811 S First St., Artesia, NM 88210
Phone (575) 748-1283 Fax (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone (505) 334-6178 Fax (505) 334-6170
District IV
1200 S St. Francis Dr., Santa Fe, NM 87505
Phone (505) 476-3460 Fax (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources
Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

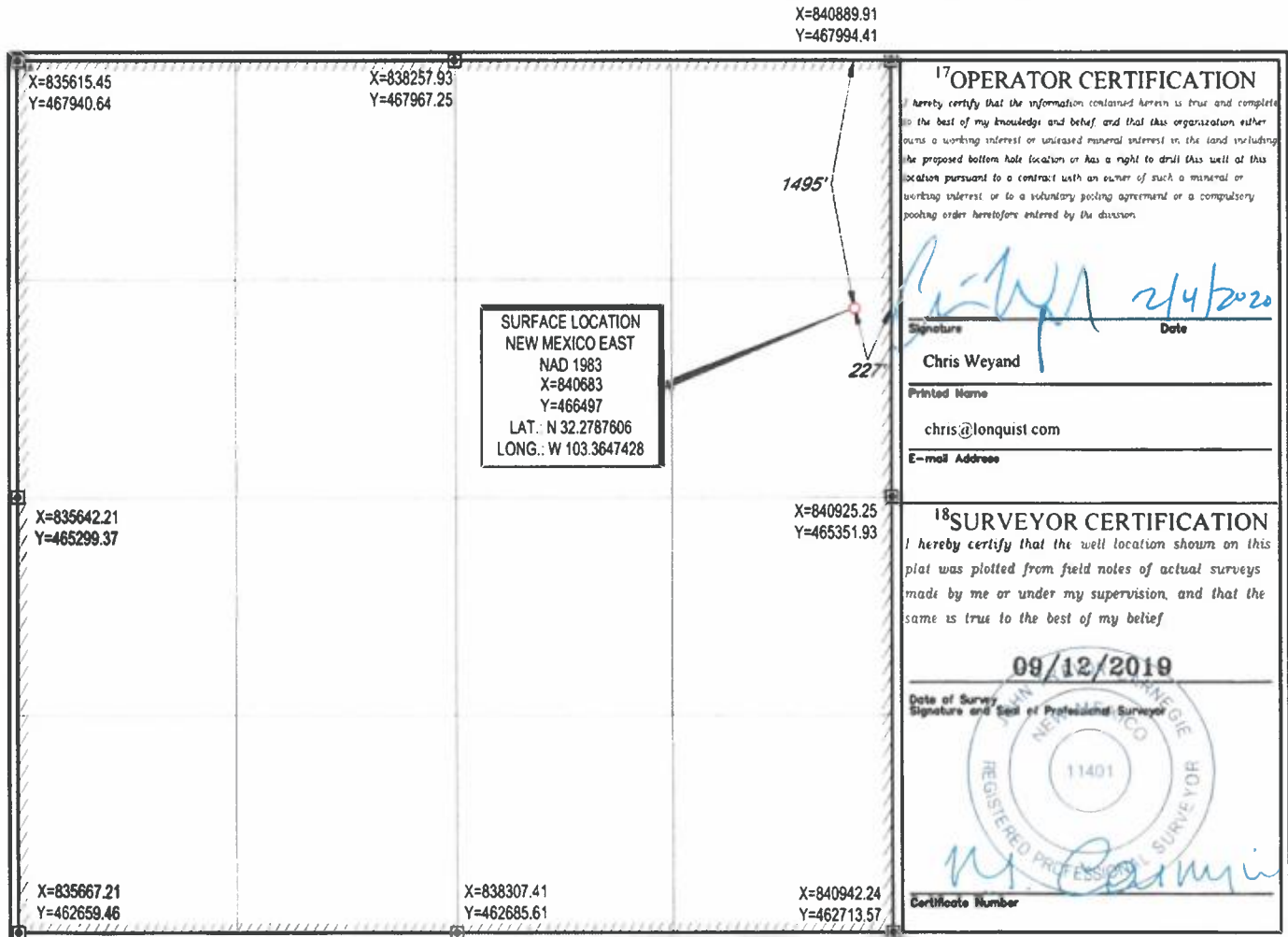
FORM C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number		² Pool Code 97869		³ Pool Name SWD, DEVONIAN-SILURIAN					
⁴ Property Code		⁵ Property Name FEELING GOOD AGAIN SWD						⁶ Well Number 1	
⁷ GRID No. 328805		⁸ Operator Name AWR DISPOSAL, LLC						⁹ Elevation 3418'	
¹⁰ Surface Location									
¹⁰ UL or lot no. H	¹¹ Section 28	¹² Township 23-S	¹³ Range 35-E	¹⁴ Lot Idn -	¹⁵ Feet from the 1495'	¹⁶ North/South line NORTH	¹⁷ Feet from the 227'	¹⁸ East/West line EAST	¹⁹ County LEA
¹¹ Bottom Hole Location If Different From Surface									
²⁰ UL or lot no.	²¹ Section	²² Township	²³ Range	²⁴ Lot Idn	²⁵ Feet from the	²⁶ North/South line	²⁷ Feet from the	²⁸ East/West line	²⁹ County
³⁰ Dedicated Acres		³¹ Joint or Infill		³² Consolidation Code		³³ Order No.			

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-101
Revised July 18, 2013

AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

¹ Operator Name and Address AWR DISPOSAL, LLC 3300 N. A Street Ste 220 Midland, Texas 79705		² OGRID Number 328805
		³ API Number TBD
⁴ Property Code	⁵ Property Name Feeling Good Again SWD	⁶ Well No. 1

⁷ Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
H	28	23S	35E	N/A	1495'	NORTH	227'	EAST	IEA

⁸ Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
-	-	-	-	-	-	-	-	-	-

⁹ Pool Information

Pool Name SWD: DEVONIAN-SILURIAN	Pool Code 97869
-------------------------------------	--------------------

Additional Well Information

¹¹ Work Type N	¹² Well Type SWD	¹³ Cable/Rotary R	¹⁴ Lease Type Private	¹⁵ Ground Level Elevation 3,418'
¹⁶ Multiple N	¹⁷ Proposed Depth 17,567'	¹⁸ Formation Devonian-Silurian	¹⁹ Contractor TBD	²⁰ Spud Date ASAP
Depth to Ground water 188'		Distance from nearest fresh water well 3,159'		Distance to nearest surface water 1 mile

We will be using a closed-loop system in lieu of lined pits

²¹ Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surface	30"	26"	202 lb/ft	1,800'	2,708	Surface
Intermediate 1	24"	20"	169 lb/ft	4,600'	4,601	Surface
Intermediate 2	17.5"	13.375"	68 lb/ft	5,500'	4,066	Surface
Production	12.25"	9.625"	47 lb/ft	11,700'	3,114	Surface
Prod. Liner	8.5"	7.625"	39 lb/ft	11,200' - 15,935'	347	11,200'

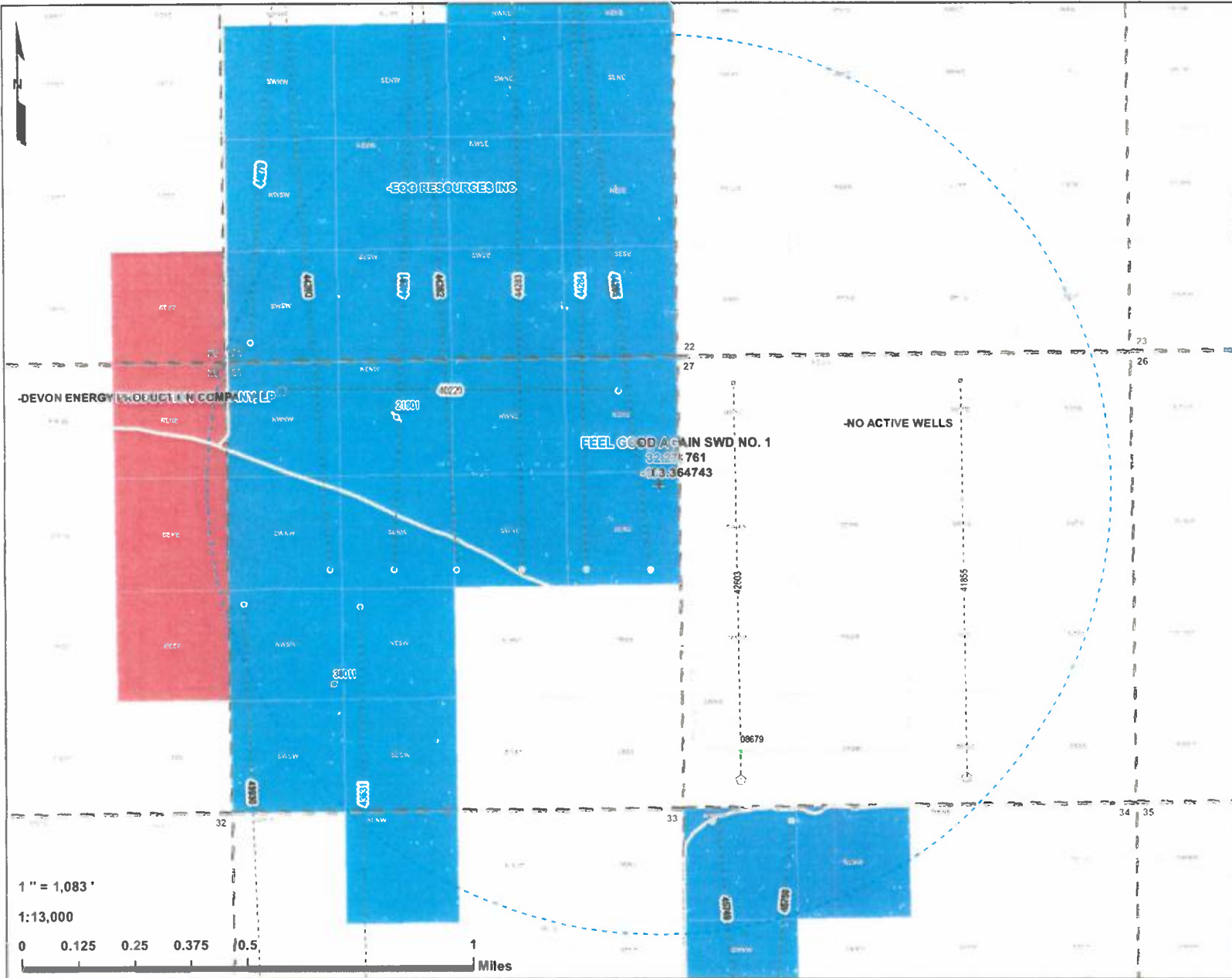
Casing/Cement Program: Additional Comments

See attached schematic.

²² Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Double Hydraulic/Blinds. Pipe	10,000 psi	8,000 psi	TBD - Schaffer/Cameron

<p>²³ I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify that I have complied with 19.15.14.9 (A) NMAC <input type="checkbox"/> and/or 19.15.14.9 (B) NMAC <input checked="" type="checkbox"/>, if applicable. Signature: </p> <p>Printed name: Christopher B. Weyand</p> <p>Title: Consulting Engineer</p> <p>E-mail Address: chris@lonquist.com</p> <p>Date: 2/4/2020</p>	<p>OIL CONSERVATION DIVISION</p> <p>Approved By:</p> <hr/> <p>Title:</p> <p>Approved Date: _____ Expiration Date: _____</p> <p>Conditions of Approval Attached</p>
Phone: (512) 600-1764	



Feeling Good Again SWD No. 1
1-Mile Offset Operators - OCD
NGL Water Solutions Permian, LLC
 Lea Co., NM

PCS - NAD 1983 SPCS NM FIPS 3001 (US Ft.)
 Drawn by: ASG | Date: 10/9/2019 | Approved by: ELR

LONQUIST & CO, LLC
 PERMIAN ENERGY ENGINEERS
 AUSTIN DALLAS WICHITA DENVER CALGARY

+ Feeling Good Again SWD No. 1 SHL

- 1-Mile
- QQ-Section (NM-PLSS 2nd Div)
- Section (NM-PLSS 1st Div)
- Township/Range (NM-PLSS)
- Lateral

API (30-025-...) SHL Status-Type (Count)

- Horizontal Surface Location (14)
- Cancelled/Abandoned Location (1)
- Plugged/Site Released - Oil (2)

API (30-025-...) BHL Status-Type (Count)

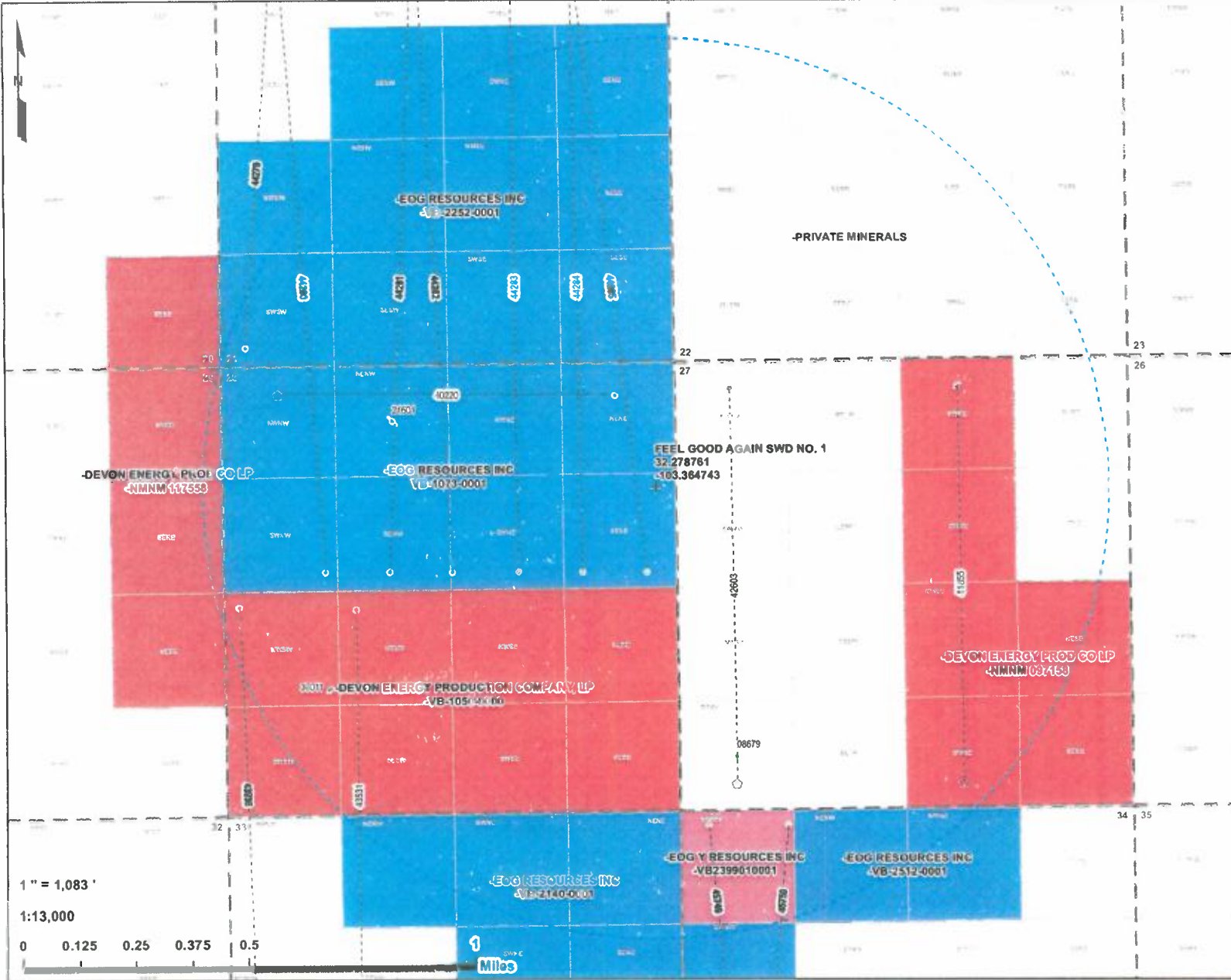
- Active - Oil (7)
- Cancelled/Abandoned Location (2)
- Permitted - Oil (5)

Offset Operators

- DEVON ENERGY PRODUCTION COMPANY, LP
- EOG RESOURCES INC
- NO ACTIVE WELLS

Source: Well SHL Data - NM-OCD (2019)

NEW MEXICO
 TEXAS
 CURRIERSON LOVING WIMMEL



Feeling Good Again SWD No. 1
 1-Mile Lessee(s) - SLO/BLM
 AWR Disposal LLC
 Lea Co., NM

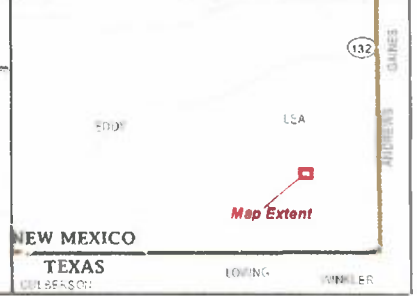
PCS NAD 1983 SPCS NM-E FIPS 3001 (US Ft.)
 Drawn by ASG | Date 2/3/2020 | Approved by ELR

LONGQUIST & CO LLC

REGISTRATION EXPIRES 12/31/2020
 EXPIRES 12/31/2020

AUSTIN | HOUSTON | WICHITA | DENVER | CARBON

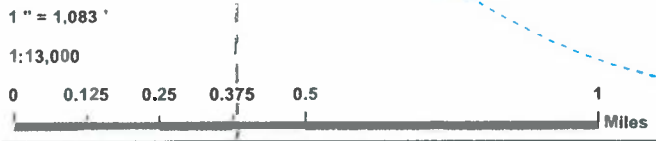
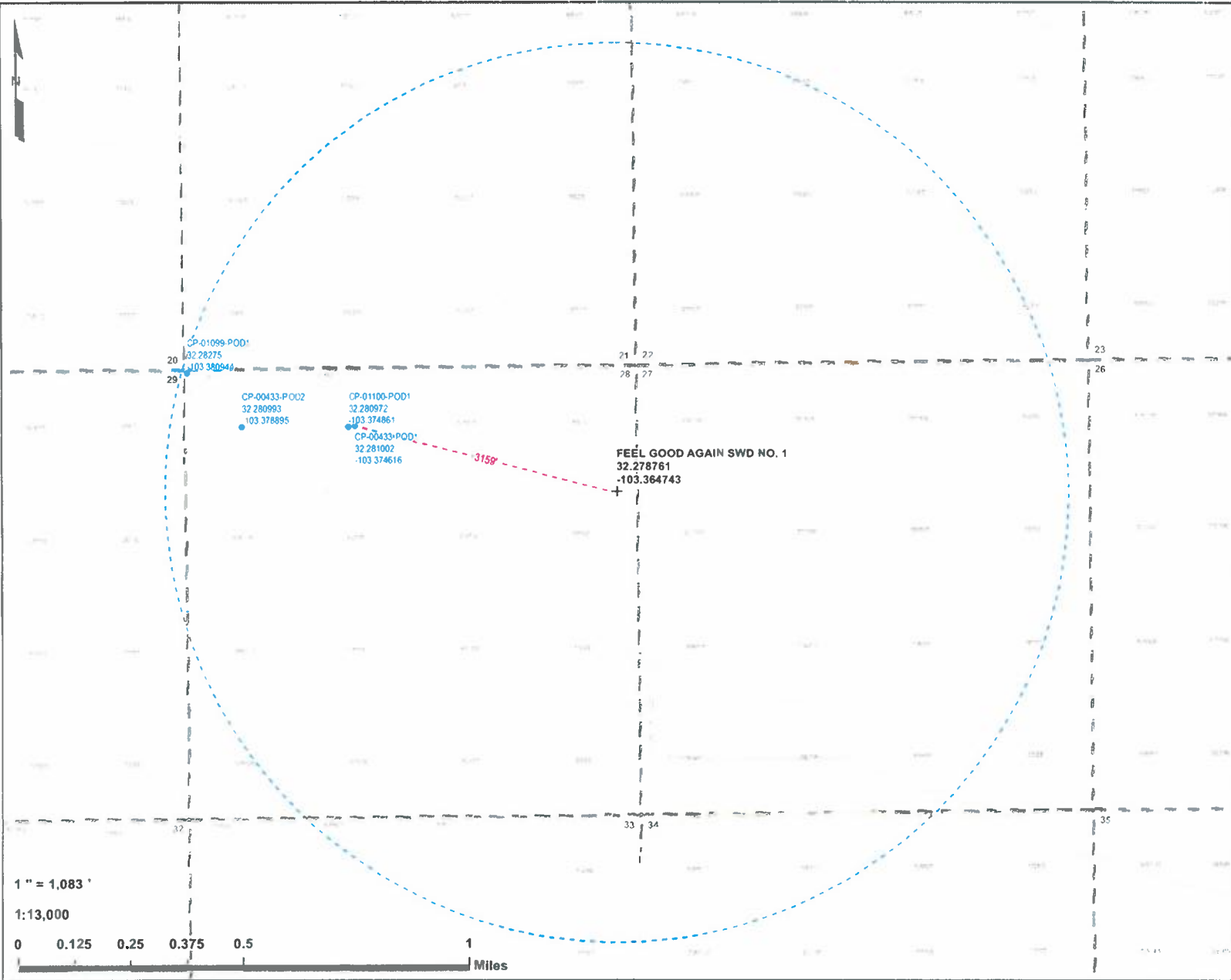
- + Feeling Good Again SWD No. 1 SHL
 - 1-Mile
 - NM-SLO
 - NM-BLM
 - QQ-Section (NM-PLSS 2nd Dw)
 - Section (NM-PLSS 1st Dw)
 - Township/Range (NM-PLSS)
 - Lateral
 - API (30-025-...) SHL Status-Type (Count)
 - Horizontal Surface Location (14)
 - Cancelled/Abandoned Location (1)
 - Plugged/Site Released - Oil (2)
 - API (30-025-...) BHL Status-Type (Count)
 - Active - Oil (7)
 - Cancelled/Abandoned Location (2)
 - Permitted - Oil (5)
- Lessee**
- DEVON ENERGY PROD CO LP, -NMNM 097158
 - DEVON ENERGY PROD CO LP, -NMNM 117558
 - DEVON ENERGY PRODUCTION COMPANY, LP, -VB-1050-0000
 - EOG RESOURCES INC, -VB-2140-0001
 - EOG RESOURCES INC, -VB-2252-0001
 - EOG RESOURCES INC, -VB-2512-0001
 - EOG RESOURCES INC, -VB-1073-0001
 - EOG Y RESOURCES INC, -VB2399010001
 - PRIVATE MINERALS
- Source: Well SHL Data - NM-CCD (2019)



1" = 1,083'

1:13,000

0 0.125 0.25 0.375 0.5 Miles



Feeling Good Again SWD No. 1
1-Mile Water Wells - OSE
NGL Water Solutions Permian, LLC
Lea Co., NM

PCS: NAD 1983 SPCS NM-E FIPS 3001 (US Ft.)
Drawn by: ASC | Date: 10/31/2019 | Approved by: ELR



- + Feeling Good Again SWD No. 1 SHL
- Water Wells (OSE) - (2)
- - - Distance Calls
- ⋯ 1-Mile
- QQ-Section (NM-PLSS 2nd Div.)
- Section (NM-PLSS 1st Div.)
- Township/Range (NM-PLSS)

Source: Well SHL Data - NM-OCD (2019)



Feeling Good Again SWD No. 1
1 Mile Area of Review List

API (30-025-...)	WELL NAME	WELL TYPE	STATUS	OPERATOR	TVD (FT.)	LATITUDE (NAD83 DD)	LONGITUDE (NAD83 DD)	SPUD DATE	FIELD
08679	PRE-ONGARD WELL 8001	O	P	PRE-ONGARD WELL OPERATOR	4130	32.2701187000	-103.3618088000	1/1/2000	
21601	PRE-ONGARD WELL 8001	O	P	PRE-ONGARD WELL OPERATOR	16000	32.281021100000	-103.374641400000	1/1/2000	
38011	RED BUL 28 STATE COM 8001L	G	C	DEVON ENERGY PRODUCTION COMPANY, LP	0	32.2724569825	-103.3771466602	12/31/9999	
40220	WARRIOR BRW STATE COM 8001H	O	A	EOG RESOURCES INC	11550	32.2819290000	-103.3789139000	10/31/2011	
41855	MHO 27 FEDERAL 8001C	O	C	DEVON ENERGY PRODUCTION COMPANY, LP	0	32.2692146000	-103.3532639000	12/31/9999	[96602] CNITA ROJA, MONROV, WEST (GAS)
42603	VIRING BRU FEDERAL 8001C	O	C	EOG RESOURCES, INC.	0	32.2692183035	-103.361801394	12/31/9999	[96403] WILDCAT, BONE SPRING; [97958] WC-025 G-08 5233528D, LWR BONE SPRIN
43531	BOWLUF 33 STATE COM 8601M	O	A	EOG RESOURCES INC	11632	32.2546561000	-103.3760630000	1/27/2017	[97958] WC-025 G-08 5233528D, LWR BONE SPRIN
43936	BOWLUF 33 STATE COM 8301M	O	A	EOG RESOURCES INC	9962	32.2549611000	-103.3798353000	9/9/2017	[97958] WC-025 G-08 5233528D, LWR BONE SPRIN
44279	HUNTER 21 STATE 8601H	O	A	EOG RESOURCES INC	11626	32.2968246000	-103.3789067000	2/14/2018	[97958] WC-025 G-08 5233528D, LWR BONE SPRIN
44280	HUNTER 21 STATE COM 8602H	O	A	EOG RESOURCES INC	11623	32.2968247000	-103.3787838000	2/17/2018	[97958] WC-025 G-08 5233528D, LWR BONE SPRIN
44281	HUNTER 21 STATE COM 8603H	O	A	EOG RESOURCES INC	11641	32.2968289000	-103.3726482000	2/3/2018	[97958] WC-025 G-08 5233528D, LWR BONE SPRIN
44282	HUNTER 21 STATE COM 8604H	O	A	EOG RESOURCES INC	11615	32.2968290000	-103.3735414000	3/3/2018	[97958] WC-025 G-08 5233528D, LWR BONE SPRIN
44283	HUNTER 21 STATE COM 8605H	O	A	EOG RESOURCES INC	0	32.2964741000	-103.3699254000	12/31/9999	[97958] WC-025 G-08 5233528D, LWR BONE SPRIN
44284	HUNTER 21 STATE COM 8606H	O	N	EOG RESOURCES INC	0	32.2958719000	-103.3676910000	12/31/9999	[97958] WC-025 G-08 5233528D, LWR BONE SPRIN
44285	HUNTER 21 STATE COM 8607H	O	N	EOG RESOURCES INC	0	32.2957903000	-103.3676319000	12/31/9999	[97958] WC-025 G-08 5233528D, LWR BONE SPRIN
45749	GLADIATOR 34 STATE COM 8301H	O	N	EOG RESOURCES INC	0	32.2547341000	-103.3614647000	12/31/9999	[97958] WC-025 G-08 5233528D, LWR BONE SPRIN
45750	GLADIATOR 34 STATE COM 8302H	O	N	EOG RESOURCES INC	0	32.2547342000	-103.3613580000	12/31/9999	[97958] WC-025 G-08 5233528D, LWR BONE SPRIN

Feeling Good Again SWD No. 1
Offsetting Produced Water Analysis

Well Name	API	Section	Township	Range	Unit	County	Field	Formation	ph	tds_mgt	sodium_mgl	calcium_mgl	iron_mgl	magnesium_mgl	manganese_mgl	chloride_mgl	bicarbonate_mgl	sulfate_mgl	co2_mgl
GAUCHO UNIT #011H	3002541184	17	225	34E	O	Lea		BONE SPRING 3RD SAND	7.5	156141.2	48642.5	6969.8	30.2	943.9	1.46	97977.9	305	1005	470
GAUCHO UNIT #010H	3002541183	17	225	34E	O	Lea		BONE SPRING 3RD SAND	6.4		46191	3712	0	560	0	79230	183	700	100
GAUCHO UNIT #012H	3002541564	20	225	34E	A	Lea		BONE SPRING 2ND SAND	7	109808.2	35202.7	5341.4	30.8	755.2	0.62	66984.9	280.6	1030	320
GAUCHO UNIT #013H	3002541565	20	225	34E	A	Lea		BONE SPRING 2ND SAND	7.5	139904.6	46238.1	6396.8	47.2	863.7	2.1	85080.8	292.8	740	550
GAUCHO UNIT #015H	3002541566	20	225	34E	D	Lea		BONE SPRING 2ND SAND	7.5	184420.1	55686.4	10540.1	47.6	1426	1.31	115274	268.4	765	770
GAUCHO UNIT #007H	3002534440	17	225	34E	H	Lea		BONE SPRING 2ND SAND	6.4	151777.7	50554.2	5768.6	86.9	717.9	1.29	91600	244	0	200
GAUCHO UNIT #007H	3002534440	17	225	34E	H	Lea		BONE SPRING 2ND SAND	6.7		49601	211	0	1	0	76000	281	586	352
GAUCHO 21 FEDERAL #002H	3002540626	21	225	34E	M	Lea		DELAWARE-BRUSHY CANYON	5.9	266467.8	71664.2	20660.8	50.2	3492.5	3.8	167562	366	0	400
SWEETNESS 30 STATE FED COM #001H	3002541864	30	235	35E	G	Lea		DELAWARE-BRUSHY CANYON	8.5	67516.1	23558.7	2923.2	0.1	401	0.03	39091.2	732	740	200
RED BULL 29 FEDERAL #001H	3002540628	29	235	35E	D	Lea		DELAWARE-BRUSHY CANYON	6.3		71207	35626	28	5437	6.2	190774	61	90	120
BELLOQ 2 STATE #002H	3001542895	2	235	31E	C	EDDY		WOLFCAMP	6.8	119471.8	37359.2	5659.1	22.4	746.1		73172.5		1035.5	250
STATE A A/C 1 #017	3002509401	24	235	36E	P	LEA	LANGLE-MATTIX	PENNSYLVANIAN			196831					120300	208	1271	
STATE B COM #001	3002509716	36	245	36E	C	LEA	CUSTER	DEVONIAN			176234					107400	128	1004	
CUSTER MOUNTAIN UNIT #001	3002520756	9	245	35E	H	LEA	CINTA ROJA	MORROW			282741					176800	161	650	
ANTELOPE RIDGE UNIT #002	3002520444	4	245	34E	B	LEA	ANTELOPE RIDGE	ATOKA	6.7	51475						31000	317	340	
BELL LAKE UNIT #006	3002508483	6	235	34E	O	LEA	BELL LAKE NORTH	DEVONIAN	7	71078						42200	500	1000	
BELL LAKE UNIT #002	3002508489	30	235	34E	N	LEA	SWD	DELAWARE			52115					32200	451	529	
ANTELOPE RIDGE UNIT #003	3002521082	34	235	34E	H	LEA	ANTELOPE RIDGE	DEVONIAN	6.9	80187						47900	476	900	
BELL LAKE UNIT #009	3002520261	18	235	34E	H	LEA	BELL LAKE NORTH	BONE SPRING			204652					130000	512	260	

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OPERATOR	

NEW MEXICO OIL CONSERVATION COMMISSION
WELL COMPLETION OR RECOMPLETION REPORT AND LOG

Form C-105
Revised 1-1-65

4. Lease Type of Lease
State Fee
Oil & Gas Lease No. **M-605**

1a. TYPE OF WELL
OIL WELL GAS WELL DRY OTHER * See remarks.
b. TYPE OF COMPLETION
NEW WELL WORK OVER DEEPEN PLUG BACK DIFF. RESVR. OTHER

7. Unit Agreement Name
North Custer Mountain Unit
8. Term of Lease
North Custer Mountain Unit

2. Name of Operator
Bass Brothers Enterprises, Inc.

9. Well No.
1

3. Address of Operator
Box 1178, Monahans, Texas 79756

10. Field and Pool, or Wildcat
Wildcat

4. Location of Well
UNIT LETTER **C** LOCATED **660** FEET FROM THE **North** LINE AND **1980** FEET FROM
THE **West** LINE OF SEC. **28** TWP. **23-S** RGE. **35-E** NMPM

12. County
Lea

15. Date Spudded **Jan. 13, 1966** 16. Date T.D. Reached **July 11, 1966** 17. Date Compl. (Ready to Prod.) ***See remarks.** 18. Elevations (DF, RKB, RT, GR, etc.) **3405 DF, 3387 GL, 3406 RKB** 19. Elev. Casinghead

20. Total Depth **16,000** 21. Plug Back T.D. **12,800** 22. If Multiple Compl., How Many
23. Intervals Drilled By
Rotary Tools **X** Cable Tools

24. Producing Interval(s), of this completion - Top, Bottom, Name
None 25. Was Directional Survey Made
No

26. Type Electric and Other Logs Run **Induction-Laterolog, Bore-hole Compensated Sonic-gamma ray, Dipmeter, and Velocity Microlog** 27. Was Well Cored
No

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
20"	94	439	26"	Shoe - 750 sks	None
16"	75	3902	18 1/2"	Shoe & Collar - 5650 sks	None
13 3/8"	61, 68, 72 & 77	5784	15"	3 stages - 2900 sks	None
9 5/8"	43.5, 47 & 51.5	12175	12"	3 stages - 4380 sks	None

29. LINER RECORD 30. TUBING RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	SIZE	DEPTH SET	PACKER SET
None					None		

31. Perforation Record (Interval, size and number)
None

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
None	

33. PRODUCTION
Date First Production **None** Production Method (Flowing, gas lift, pumping - Size and type pump) *** See remarks.** Well Status (Prod. or Shut-in)
Date of Test Hours Tested Choke Size Prod'n. For Test Period Oil - Bbl. Gas - MCF Water - Bbl. Gas - Oil Ratio
Flow Tubing Press. Casing Pressure Calculated 24-Hour Rate Oil - Bbl. Gas - MCF Water - Bbl. Oil Gravity - API (Corr.)

34. Disposition of Gas (Sold, used for fuel, vented, etc.) Test Witnessed By

35. List of Attachments

36. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.
SIGNED H. J. Murty, Jr. TITLE Div. Prod. Clerk DATE July 20, 1966

* Rig released to U. S. G. S. @ 4:00 PM, 7-15-66. U. S. G. S. assumed all responsibility for further operations in accordance with telegrams - copies attached to Form C-103.

han 20 days after the completion of any newly-drilled or run on the well and a summary of all special tests con- of directionally drilled wells, true vertical depths shall zone. The form is to be filed in quintuplicate except on

BASS BROTHERS ENTERPRISES, INC. ET AL

North Custer Mountain Unit #1

FORMATION MARKERS:

T/Rustler:	1555	(/1851)
T/Salt:	1695	(/1711)
Base Salt:	3705	(- 299)
T/Yates:	3947	(- 541)
T/Reef:	4397	(- 991)
T/Delaware Sand:	5635	(-2229)
T/Bone Spring:	8997	(-5591)
T/Wolfcamp:	11585	(-8179)
T/Strawn:	12502	(-9096)
T/Atoka:	12725	(-9319)
T/Barnett:	14159	(-10753)
T/Miss. Lime:	15710	(-12304)
T/Woodford:	15570	(-12164)
T/Devonian:	15846	(-12440)

PHICAL SECTION OF STATE

Northwestern New Mexico

_____	T. Penn. "B"	_____
and _____	T. Penn. "C"	_____
_____	T. Penn. "D"	_____
_____	T. Leadville	_____
_____	T. Madison	_____
_____	T. Elbert	_____
_____	T. McCracken	_____
_____	T. Ignacio Qtzite	_____
_____	T. Granite	_____
_____	T.	_____
_____	T.	_____
_____	T.	_____
_____	T.	_____
_____	T.	_____
_____	T.	_____
_____	T.	_____
_____	T.	_____

FORMATION RECORD (Attach additional sheets if necessary)

From	To	Thickness in Feet	Formation	From	To	Thickness in Feet	Formation
0	445	445	Sand, Gravel & Red Bed	-			
445	900	455	Sand & Shale				
900	1286	386	Anhydrite				
1286	1457	171	Red Bed & Anhydrite				
1457	1947	490	Anhydrite & Sand				
1947	3546	1599	Anhydrite & Salt				
3546	3928	382	Lime & Anhydrite				
3928	4117	189	Lime				
4117	4462	345	Dolomite & Sand				
4462	5955	1493	Drilled without returns.				
5955	7584	1629	Lime & Sand				
7584	8048	464	Lime, Sand & Shale				
8048	8435	387	Sand & Shale				
8435	9621	1186	Lime & Sand				
9621	16000	6379	Lime, Shale & Chert				

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NEW MEXICO OIL CONSERVATION COMMISSION

Form C-103
Supersedes Old
C-102 and C-103
Effective 1-1-65

AM 7 27
JUL 22 11 15 AM '66

5a. Indicate Type of Lease
State Fee

5. State Oil & Gas Lease No.
M-605

7. Unit Agreement Name
North Custer Mountain Unit

8. Farm or Lease Name
North Custer Mountain Unit

9. Well No.
1

10. Field and Pool, or Wildcat
Wildcat

12. County
Lea

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. OIL WELL GAS WELL OTHER- Dry Hole

2. Name of Operator
Bass Brothers Enterprises, Inc.

3. Address of Operator
Box 1178, Monahans, Texas

4. Location of Well
UNIT LETTER C 660 FEET FROM THE North LINE AND 1980 FEET FROM THE West LINE, SECTION 28 TOWNSHIP 23-S RANGE 35-E NMPM.

15. Elevation (Show whether DF, RT, GR, etc.)
3405 DF.

Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

SUBSEQUENT REPORT OF:

PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	PLUG AND ABANDONMENT <input type="checkbox"/>
WELL OR ALTER CASING <input type="checkbox"/>	OTHER <input type="checkbox"/>	CASING TEST AND CEMENT JOBS <input type="checkbox"/>	
		OTHER Disposal of well, and release from further obligation concerning the well. <input type="checkbox"/>	

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1703.

Finished drilling to 16,000' in lime, at 2:30 p.m. 7-11-66. Took DST #10, 15550-16000; recovered water with no show of oil or gas. Ran Schlumberger dual induction - laterolog, microlog, bore-hole-compensated sonic-gamma ray log, and dip meter, followed by a velocity survey. Logging completed at 7:00 a.m. MST 7-14-66. Went in hole with open-ended drill pipe. Halliburton Oil Well Cementing Co. spotted three cement plugs, as follows:

Plug #1: Spotted 100 sx. regular neat cement at 16,000'. Slurry weight 15.2 lbs. per gal. Calculated top of plug at 15,700'. Plug down at 12:15 p.m. 7-15-66.

Plug #2: Spotted 100 sx. regular neat cement at 15,200'. Slurry weight 15.1 lbs. per gal. Calculated top of plug at 14,900'. Plug down at 1:40 p.m. 7-15-66.

Plug #3: Spotted 100 sx. regular neat cement at 13,100'. Slurry weight 15.3 lbs. per gal. Calculated top of plug at 12,800'. Plug down at 3:05 p.m. 7-15-66.

Rig was released to the United States Geological Survey at 4:00 p.m. 7-15-66. The U. S. G. S. assumed responsibility for all further operations, in accordance with telegrams, copies of which are attached.

18. I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED Walter D. Powers TITLE Asst. Div. Mgr. DATE July 20, 1966

APPROVED BY [Signature] TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

February 27, 2020

TYLER MOEHLMAN

Lonquist Field Services, LLC

12912 HILL COUNTRY BLVD., SUITE F-200

Austin, TX 78738

RE: FEELING GOOD AGAIN SWD #1

Enclosed are the results of analyses for samples received by the laboratory on 02/13/20 13:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Total Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Lonquist Field Services, LLC 12912 HILL COUNTRY BLVD., SUITE F-200 Austin TX, 78738	Project: FEELING GOOD AGAIN SWD #1 Project Number: 32.280972-103.374861 Project Manager: TYLER MOEHLMAN Fax To: (512) 732-9816	Reported: 27-Feb-20 12:45
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Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FEELING GOOD AGAIN - CP-01100	H000451-01	Water	13-Feb-20 10:50	13-Feb-20 13:00

Cardinal Laboratories

*=Accredited Analyte

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Analytical Results For:

Lonquist Field Services, LLC 12912 HILL COUNTRY BLVD., SUITE F-200 Austin TX, 78738	Project: FEELING GOOD AGAIN SWD #1 Project Number: 32.280972-103.374861 Project Manager: TYLER MOEHLMAN Fax To: (512) 732-9816	Reported: 27-Feb-20 12:45
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**FEELING GOOD AGAIN - CP-01100 POD 1
H000451-01 (Water)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Inorganic Compounds

Alkalinity, Bicarbonate	332		5.00	mg/L	1	0020601	AC	14-Feb-20	310.1	
Alkalinity, Carbonate	<1.00		1.00	mg/L	1	0020601	AC	14-Feb-20	310.1	
Chloride*	232		4.00	mg/L	1	0020512	GM	14-Feb-20	4500-CI-B	
Conductivity*	2410		1.00	uS/cm	1	0021402	GM	14-Feb-20	120.1	
pH*	7.47		0.100	pH Units	1	0021402	GM	14-Feb-20	150.1	
Resistivity	4.14			Ohms/m	1	0021402	GM	14-Feb-20	120.1	
Specific Gravity @ 60° F	1.007		0.000	[blank]	1	0021407	AC	14-Feb-20	SM 2710F	
Sulfate*	634		125	mg/L	12.5	0021701	AC	17-Feb-20	375.4	
S*	1580		5.00	mg/L	1	0021410	GM	17-Feb-20	160.1	
Alkalinity, Total*	272		4.00	mg/L	1	0020601	AC	14-Feb-20	310.1	
Sulfide, total	<0.0100		0.0100	mg/L	1	0021408	AC	14-Feb-20	376.2	

Green Analytical Laboratories

Total Recoverable Metals by ICP (E200.7)

Barium*	<0.250		0.250	mg/L	5	B200238	AES	24-Feb-20	EPA200.7	
Calcium*	90.6		0.500	mg/L	5	B200238	AES	24-Feb-20	EPA200.7	
Iron*	<0.250		0.250	mg/L	5	B200238	AES	24-Feb-20	EPA200.7	
Magnesium*	61.2		0.500	mg/L	5	B200238	AES	24-Feb-20	EPA200.7	
Potassium*	8.59		5.00	mg/L	5	B200238	AES	24-Feb-20	EPA200.7	
Sodium*	358		5.00	mg/L	5	B200238	AES	24-Feb-20	EPA200.7	

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Lonquist Field Services, LLC 12912 HILL COUNTRY BLVD., SUITE F-200 Austin TX, 78738	Project: FEELING GOOD AGAIN SWD #1 Project Number: 32.280972-103.374861 Project Manager: TYLER MOEHLMAN Fax To: (512) 732-9816	Reported: 27-Feb-20 12:45
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Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 0020512 - General Prep - Wet Chem

Blank (0020512-BLK1)										
Prepared & Analyzed: 05-Feb-20										
Chloride	ND	4.00	mg/L							
LCS (0020512-BS1)										
Prepared & Analyzed: 05-Feb-20										
Chloride	104	4.00	mg/L	100		104	80-120			
LCS Dup (0020512-BSD1)										
Prepared & Analyzed: 05-Feb-20										
Chloride	100	4.00	mg/L	100		100	80-120	3.92	20	

Batch 0020601 - General Prep - Wet Chem

nk (0020601-BLK1)										
Prepared & Analyzed: 06-Feb-20										
Alkalinity, Carbonate	ND	1.00	mg/L							
Alkalinity, Bicarbonate	5.00	5.00	mg/L							
Alkalinity, Total	4.00	4.00	mg/L							
LCS (0020601-BS1)										
Prepared & Analyzed: 06-Feb-20										
Alkalinity, Carbonate	ND	2.50	mg/L				80-120			
Alkalinity, Bicarbonate	305	12.5	mg/L				80-120			
Alkalinity, Total	250	10.0	mg/L	250		100	80-120			
LCS Dup (0020601-BSD1)										
Prepared & Analyzed: 06-Feb-20										
Alkalinity, Carbonate	ND	2.50	mg/L				80-120		20	
Alkalinity, Bicarbonate	330	12.5	mg/L				80-120	7.87	20	
Alkalinity, Total	270	10.0	mg/L	250		108	80-120	7.69	20	

Batch 0021402 - General Prep - Wet Chem

LCS (0021402-BS1)										
Prepared & Analyzed: 14-Feb-20										
Conductivity	508		uS/cm	500		102	80-120			
pH	7.05		pH Units	7.00		101	90-110			

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Lonquist Field Services, LLC 12912 HILL COUNTRY BLVD., SUITE F-200 Austin TX, 78738	Project: FEELING GOOD AGAIN SWD #1 Project Number: 32.280972-103.374861 Project Manager: TYLER MOEHLMAN Fax To: (512) 732-9816	Reported: 27-Feb-20 12:45
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**Inorganic Compounds - Quality Control
Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 0021402 - General Prep - Wet Chem

Duplicate (0021402-DUP1)	Source: H000435-01			Prepared & Analyzed: 14-Feb-20						
Conductivity	904	1.00	uS/cm		895			1.00	20	
pH	7.37	0.100	pH Units		7.32			0.681	20	
Resistivity	11.1		Ohms/m		11.2			1.00	20	

Batch 0021407 - General Prep - Wet Chem

Duplicate (0021407-DUP1)	Source: H000435-01			Prepared & Analyzed: 14-Feb-20						
Specific Gravity @ 60° F	0.9990	0.000	[blank]		0.9993			0.0310	20	

Batch 0021408 - General Prep - Wet Chem

nk (0021408-BLK1)	Prepared & Analyzed: 14-Feb-20									
Sulfide, total	ND	0.0100	mg/L							

Duplicate (0021408-DUP1)	Source: H000435-01			Prepared & Analyzed: 14-Feb-20						
Sulfide, total	ND	0.0100	mg/L		ND				20	

Batch 0021410 - Filtration

Blank (0021410-BLK1)	Prepared: 14-Feb-20 Analyzed: 17-Feb-20									
TDS	ND	5.00	mg/L							

LCS (0021410-BS1)	Prepared: 14-Feb-20 Analyzed: 17-Feb-20									
TDS	533		mg/L		500		107	80-120		

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Analytical Results For:

Lonquist Field Services, LLC 12912 HILL COUNTRY BLVD., SUITE F-200 Austin TX, 78738	Project: FEELING GOOD AGAIN SWD #1 Project Number: 32.280972-103.374861 Project Manager: TYLER MOEHLMAN Fax To: (512) 732-9816	Reported: 27-Feb-20 12:45
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Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 0021410 - Filtration

Duplicate (0021410-DUP1)		Source: H000435-01		Prepared: 14-Feb-20 Analyzed: 17-Feb-20					
TDS	512	5.00	mg/L		481	6.24		20	

Batch 0021701 - General Prep - Wet Chem

Blank (0021701-BLK1)				Prepared & Analyzed: 17-Feb-20	
Sulfate	ND	10.0	mg/L		

LCS (0021701-BS1)				Prepared & Analyzed: 17-Feb-20	
Sulfate	19.5	10.0	mg/L	20.0	97.4 80-120

* CS Dup (0021701-BSD1)				Prepared & Analyzed: 17-Feb-20	
atc	21.5	10.0	mg/L	20.0	107 80-120 9.67 20

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Analytical Results For:

Lonquist Field Services, LLC 12912 HILL COUNTRY BLVD., SUITE F-200 Austin TX, 78738	Project: FEELING GOOD AGAIN SWD #1 Project Number: 32.280972-103.374861 Project Manager: TYLER MOEHLMAN Fax To: (512) 732-9816	Reported: 27-Feb-20 12:45
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Total Recoverable Metals by ICP (E200.7) - Quality Control

Green Analytical Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B200238 - Total Rec. 200.7/200.8/200.2

Blank (B200238-BLK1)

Prepared & Analyzed: 24-Feb-20

Iron	ND	0.050	mg/L							
Sodium	ND	1.00	mg/L							
Barium	ND	0.050	mg/L							
Potassium	ND	1.00	mg/L							
Calcium	ND	0.100	mg/L							
Magnesium	ND	0.100	mg/L							

LCS (B200238-BS1)

Prepared & Analyzed: 24-Feb-20

Potassium	7.90	1.00	mg/L	8.00		98.8	85-115			
Magnesium	19.3	0.100	mg/L	20.0		96.6	85-115			
	3.88	0.050	mg/L	4.00		97.1	85-115			
Calcium	3.87	0.100	mg/L	4.00		96.8	85-115			
Sodium	3.20	1.00	mg/L	3.24		98.8	85-115			
Barium	1.93	0.050	mg/L	2.00		96.3	85-115			

LCS Dup (B200238-BSD1)

Prepared & Analyzed: 24-Feb-20

Magnesium	19.4	0.100	mg/L	20.0		96.8	85-115	0.158	20	
Barium	1.94	0.050	mg/L	2.00		96.9	85-115	0.668	20	
Iron	3.87	0.050	mg/L	4.00		96.8	85-115	0.290	20	
Potassium	7.90	1.00	mg/L	8.00		98.7	85-115	0.0166	20	
Calcium	3.90	0.100	mg/L	4.00		97.4	85-115	0.673	20	
Sodium	3.19	1.00	mg/L	3.24		98.5	85-115	0.262	20	

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Notes and Definitions

- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

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101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: <u>Longquist</u>		BILL TO			ANALYSIS REQUEST																					
Project Manager: <u>Tyler Moehlman</u>		P.O. #:																								
Address:		Company:																								
City:	State:	Zip:	Attn:																							
Phone #:	Fax #:		Address:																							
Project #:	Project Owner		City:																							
Project Name: <u>Feeling Good Again SWD#1</u>	State:		Zip:																							
Project Location: <u>32.280972 - 103.574861</u>	Phone #:		Fax #:																							
Sampler Name:																										
FOR LAB USE ONLY																										
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX			PRESERV.	SAMPLING																		
<u>H000451</u>	<u>Feeling Good Again CP-01100 PoD1</u>			GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME												
													<u>2/13/20</u>	<u>10:50</u>	<u>scale</u>	<u>Sulfide</u>										

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Relinquished By:	Date: <u>2/13/20</u>	Received By:	Verbal Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:	
	Time: <u>1:30</u>	<u>Jodi Hanson</u>	All Results are emailed. Please provide Email address:		
Relinquished By:	Date:	Received By:	REMARKS:		
	Time:				
Delivered By: (Circle One)	Observed Temp. °C <u>4.7</u>	Sample Condition	Turnaround Time: <u>Standard</u>	<input checked="" type="checkbox"/> Bacteria (only)	Sample Condition
Sampler - UPS - Bus - Other:	Corrected Temp. °C	Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<u>Rush</u>	<input type="checkbox"/> Cool Intact	Observed Temp. °C
		Checked By: <u>[Signature]</u>	Thermometer ID #97	<input type="checkbox"/> Yes <input type="checkbox"/> No	
			Correction Factor +0.4 °C	<input type="checkbox"/> No <input type="checkbox"/> No	Corrected Temp. °C

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

CARDINAL LABORATORIES SCALE INDEX WATER ANALYSIS REPORT

Company : LONQUIST FIELD SERVICES	Date Sampled : 02/13/20
Lease Name : FEELING GOOD AGAIN SWD #1	Company Rep. : TYLER MOEHLMAN
Well Number : CP-01100 POD 1 (H000451-01)	
Location : 32.280972 -103.374861	

ANALYSIS

- | | | |
|-----------------------------------|--------|------------------------------------|
| 1. pH | 7.47 | |
| 2. Specific Gravity @ 60/60 F. | 1.0070 | |
| 3. CaCO3 Saturation Index @ 80 F. | +0.031 | 'Calcium Carbonate Scale Possible' |
| @ 140 F. | +0.731 | 'Calcium Carbonate Scale Possible' |

Dissolved Gasses

- | | | |
|---------------------|-------|-----|
| 4. Hydrogen Sulfide | 0.000 | PPM |
| 5. Carbon Dioxide | ND | PPM |
| 6. Dissolved Oxygen | ND | PPM |

Cations

		/	Eq. Wt.	=	MEQ/L
7. Calcium (Ca++)	90.60	/	20.1	=	4.51
8. Magnesium (Mg++)	61.20	/	12.2	=	5.02
9. Sodium (Na+)	358	/	23.0	=	15.44
10. Barium (Ba++)	0.000	/	68.7	=	0.00

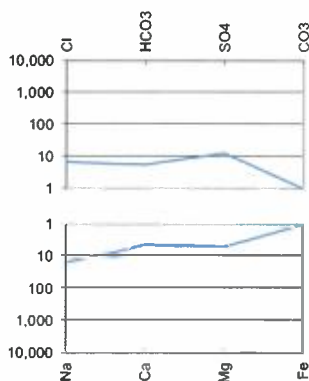
Anions

11. Hydroxyl (OH-)	0	/	17.0	=	0.00
12. Carbonate (CO3=)	0	/	30.0	=	0.00
13. Bicarbonate (HCO3-)	332	/	61.1	=	5.43
14. Sulfate (SO4=)	634	/	48.8	=	12.99
15. Chloride (Cl-)	232	/	35.5	=	6.54

Other

- | | | | | | |
|--|-------|------------|------|-------------|------|
| 16. Total Iron (Fe) | 0.000 | / | 18.2 | = | 0.00 |
| 17. Total Dissolved Solids | 1,580 | | | | |
| 18. Total Hardness As CaCO3 | 478.0 | | | | |
| 19. Calcium Sulfate Solubility @ 90 F. | 1,250 | | | | |
| 20. Resistivity (Measured) | 4.140 | Ohm/Meters | @ 77 | Degrees (F) | |

Logarithmic Water Pattern



PROBABLE MINERAL COMPOSITION

COMPOUND	Eq. Wt.	X	MEQ/L	=	mg/L
Ca(HCO3)2	81.04	X	4.51	=	365
CaSO4	68.07	X	0.00	=	0
CaCl2	55.50	X	0.00	=	0
Mg(HCO3)2	73.17	X	0.93	=	68
MgSO4	60.19	X	4.09	=	246
MgCl2	47.62	X	0.00	=	0
NaHCO3	84.00	X	0.00	=	0
NaSO4	71.03	X	8.90	=	632
NaCl	58.46	X	6.54	=	382

ND = Not Determined